### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter **Report No:** WIR-022388 Address: 333 Burma Road **Date Inspected:** 28-Mar-2011

City: Oakland, CA 94607

**Project Name:** SAS Superstructure **OSM Arrival Time:** 700 **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** Liu Hua Jie. **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes N/A **Delayed / Cancelled:** No

**Bridge No:** 34-0006 **Component:** OBG components.

## **Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Mr. Shailesh Wadkar was present during the times noted above for observations relative to the fabrication of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA Inspector observed and/or found the following:

## Trial Assembly:

This QA Inspector observed the following work in progress:

#### OBG Seg 13AE:

The Shielded Metal Arc Welding (SMAW) process on weld joint no: SP3058-010-010 [I-rib stiffener (RS3073) to Side Panel (SP) 3058 fillet weld at Panel point 118]. The welder is identified as 204339 and was observed welding in 2F position. ZPMC QC was identified as Liu Hua Jie. The welding variables recorded by this QC appeared to comply with WPS: B-P-2112-FCM-1.

The Flux Cored Arc Welding (FCAW) process on weld joint no: Seg3007R-011 [Floor Beam (FB) 3101A to Deck Panel (DP) diaphragm (of DP3072A), complete joint penetration (CJP) weld at PP117.5]. The welder is identified as 066236 and was observed welding in 2G position. ZPMC QC was identified as Liu Hua Jie. The welding variables recorded by this QC appeared to comply with WPS: B-T-2232-ESAB.

# WELDING INSPECTION REPORT

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The SMAW process on weld joint no: Seg3007N-005 [DP diaphragm splice joint (SA7040A to FB3114), CJP weld at PP118.35]. The welder is identified as 037743 and was observed welding in 3G position. ZPMC QC was identified as Liu Hua Jie. The welding variables recorded by this QC appeared to comply with WPS: B-P-2213-B-U2-FCM-1.

The SMAW process on weld joint no: RS3099-001-002, CJP weld at PP119-1500. The welder is identified as 066416 and was observed welding in 1G position. ZPMC OC was identified as Liu Hua Jie. The welding variables recorded by this QC appeared to comply with WPS: B-P-2211-Tc-U4b-FCM-1.

The SMAW process on weld joint no: Seg3007L-141 (FB to DP), CJP weld at PP119-1500. The welder is identified as 067183 and was observed welding in 4G position. ZPMC QC was identified as Liu Hua Jie. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-Tc-U4b-FCM-1.

This QA Inspector observed ZPMC personnel performing the fit-up operation of stiffeners RS3112A and RS3112B (at PP117.5 - PP118). The ZPMC personnel performed the tack weld operation using THJ 506Fe-1 electrode. The base metal of the RS stiffeners is A709-HPS 485W. This QA Inspector notified the ZPMC CWI, identified as Liu Hua Jie and ABF QA, identified as Wang Heng. ZPMC and ABF personnel agreed to remove the tack weld, perform Magnetic Particle Testing (MT) of the ground out area of the tack weld and perform the tack weld operation using the correct electrode. This QA Inspector observed the ABF NDT personnel performing the MT inspection of the ground out tack-weld area. See attached photo for further details. This QA Inspector notified the CT Lead Inspector of this incident as documented in this report.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable Contract documents.





## **Summary of Conversations:**

No significant conversations were reported on this date.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang; phone: 15000422372., who represents the Office of Structural Materials for your project.

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| Inspected By: | Wadkar, Sailesh | Quality Assurance Inspector |
|---------------|-----------------|-----------------------------|
| Reviewed By:  | Peterson,Art    | QA Reviewer                 |